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16 January 1959

Watt E

MEMORANDUM FOR THE RECORD

SUBJECT: [REDACTED]

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1. On 13 January 1959, the undersigned visited [REDACTED] to discuss their progress on the program to develop instrumentation [REDACTED] A General Services Work Order was used to investigate methods of measuring the extremely small torques and deflections [REDACTED]

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2. Three measuring techniques had been tried: 1) strain guage, 2) differential transformer, and 3) a very sensitive dial guage indicator (calibrated in .0001 inch). All three could be used to indicate when a [REDACTED] however, the dial indicator appeared the most promising with respect to sensitivity, simplicity of equipment necessary, and being the easiest to interpret. [REDACTED] also had the following suggestions which should be tried when [REDACTED] 1) a means of applying a constant (but adjustable in magnitude) tensioning force, 2) an adjustable detent mechanism [REDACTED] positioned at finite intervals to correspond to the lever levels, and 3) a torque limiting device [REDACTED] to minimize breakage.

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3. In the early part of February 1959, the undersigned and a representative of FI/Division D will visit [REDACTED] at which time the above techniques will be available for trial and an evaluation will be made of their usefulness.

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